

ABSTRACT OF THE DISCLOSURE

A system, device, and method for managing service level agreements
5 in an optical communication system uses an optical service agent to manage a
service level agreement (SLA) for a user. The optical service agent can
perform both real-time and off-line analysis for the user, and can interact with
various network elements (including the core optical communication
network) to handle billing, penalty, and other issues associated with a SLA
10 breach. Among other things, the optical service agent may monitor and
analyze a connection in real-time for determining SLA compliance, gather and
maintain statistical information relating to a connection, analyze the statistical
information off-line for determining SLA compliance, patterns, and trends,
interact with a service provider to enforce penalty provisions in the SLA,
15 interact with a service provider to negotiate a credit for services not provided
by the service provider in accordance with the SLA, interact with a service
provider to negotiate "replacement" services for a breach of the SLA, interact
with various network elements to rectify a breach of the SLA, interact with the
service provider to dynamically modify the SLA based upon changing user
20 requirements, and interface with a billing/accounting system to provide SLA-
related information.